

# **Automatic Conveyor for Industrial Automation**

---

## **Aim:**

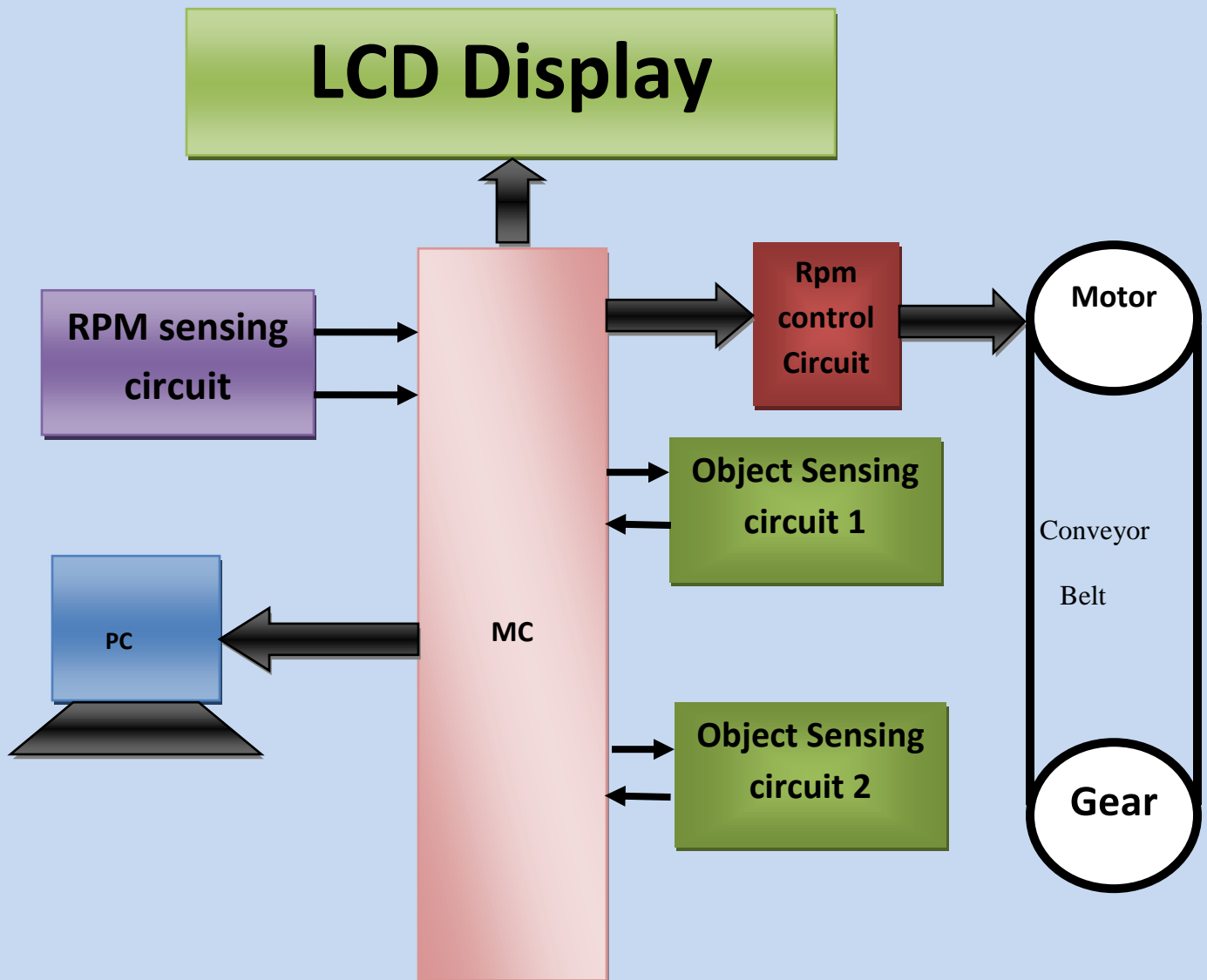
In this project we have to control the conveyor automatically by sensing the objects placed in the conveyor. Also, by using RPM sensor we have to control the speed the motor.

The number of tags handled by the conveyor on the whole will be displayed simultaneously along with regulating the speed of conveyor. This project will save the power of motor operating the conveyor by regulating the conveyor automation, i.e. the conveyor actuates only when a tag is sensed.

## **OBJECTIVES:**

This Automatic Conveyor for Industrial Automation consists of two object sensors, rpm sensor, and rpm control circuit which controls the speed of the motor driving the conveyor. The object sensors which detect the objects sends signal to the motor driving circuit to on/off the motor.

Block diagram of motor control circuits:



## **Description:**

Dynamic environments pose a challenge to the read performances of current RPM control systems. Moving tags on a conveyor belt affect the read performance of a static reader. Our project attempts to evaluate a static reader identifying moving tags on a conveyor belt. We propose an algorithm enabling the conveyor belt to dynamically adjust its speed according to the load automatically, also it reliably identify tags without prior knowledge of how tags are distributed on the conveyor belt. We show by simulations that our algorithm yields more than 99% of tags being successfully identified, along with trying to maximize the average speed of the conveyor belt. In addition, the algorithm can be applied for different reader's ranges.

The number of tags handled by the conveyor on the whole will be displayed simultaneously along with regulating the speed of conveyor. This project will save the power of motor operating the conveyor by regulating the conveyor automation, i.e. the conveyor actuates only when a tag is sensed.